

A. D. DUSENBERY.
WINDMILL REGULATOR.
APPLICATION FILED MAR. 27, 1908.

925,569.

Patented June 22, 1909.

Fig. 1.

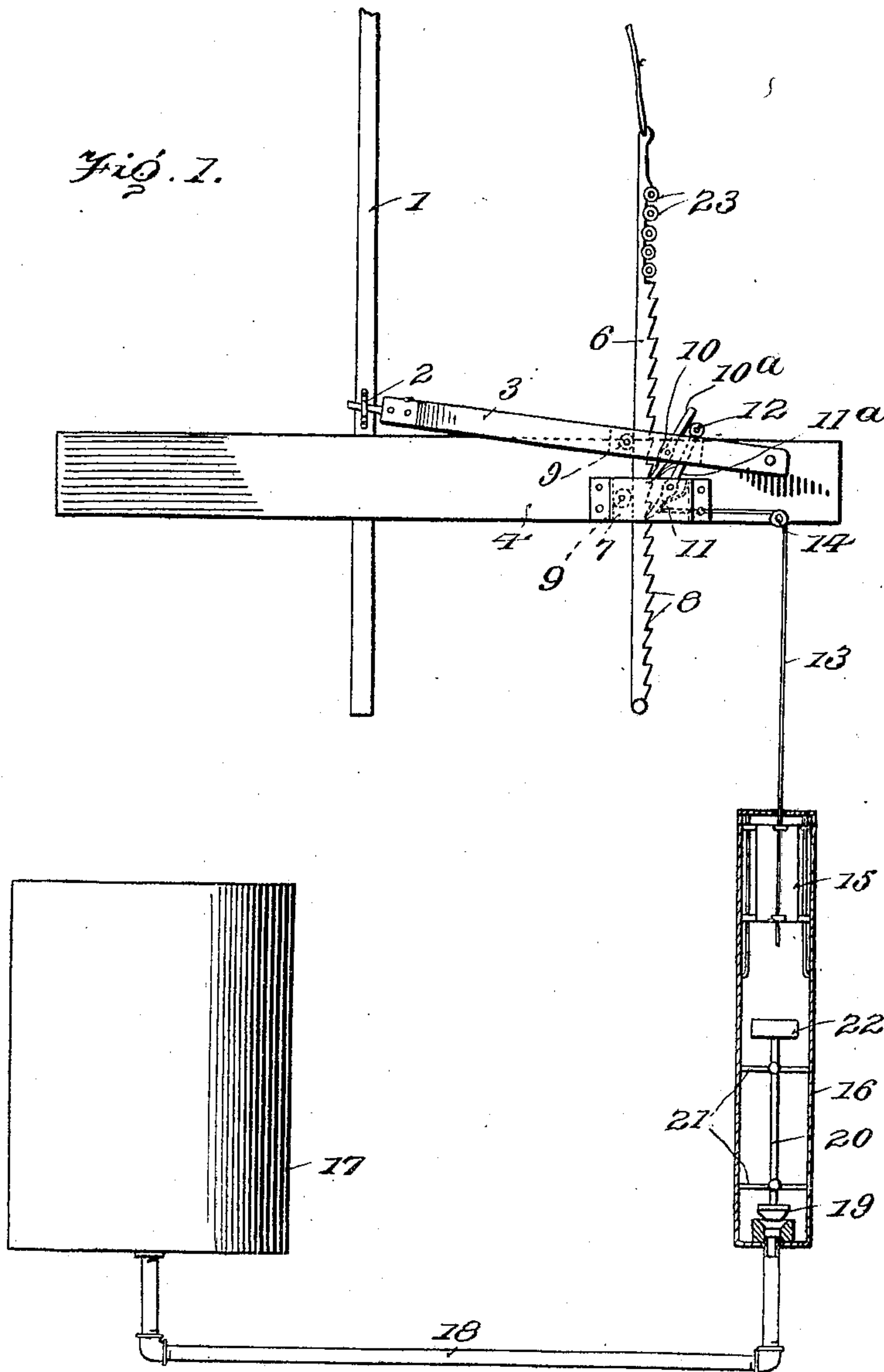
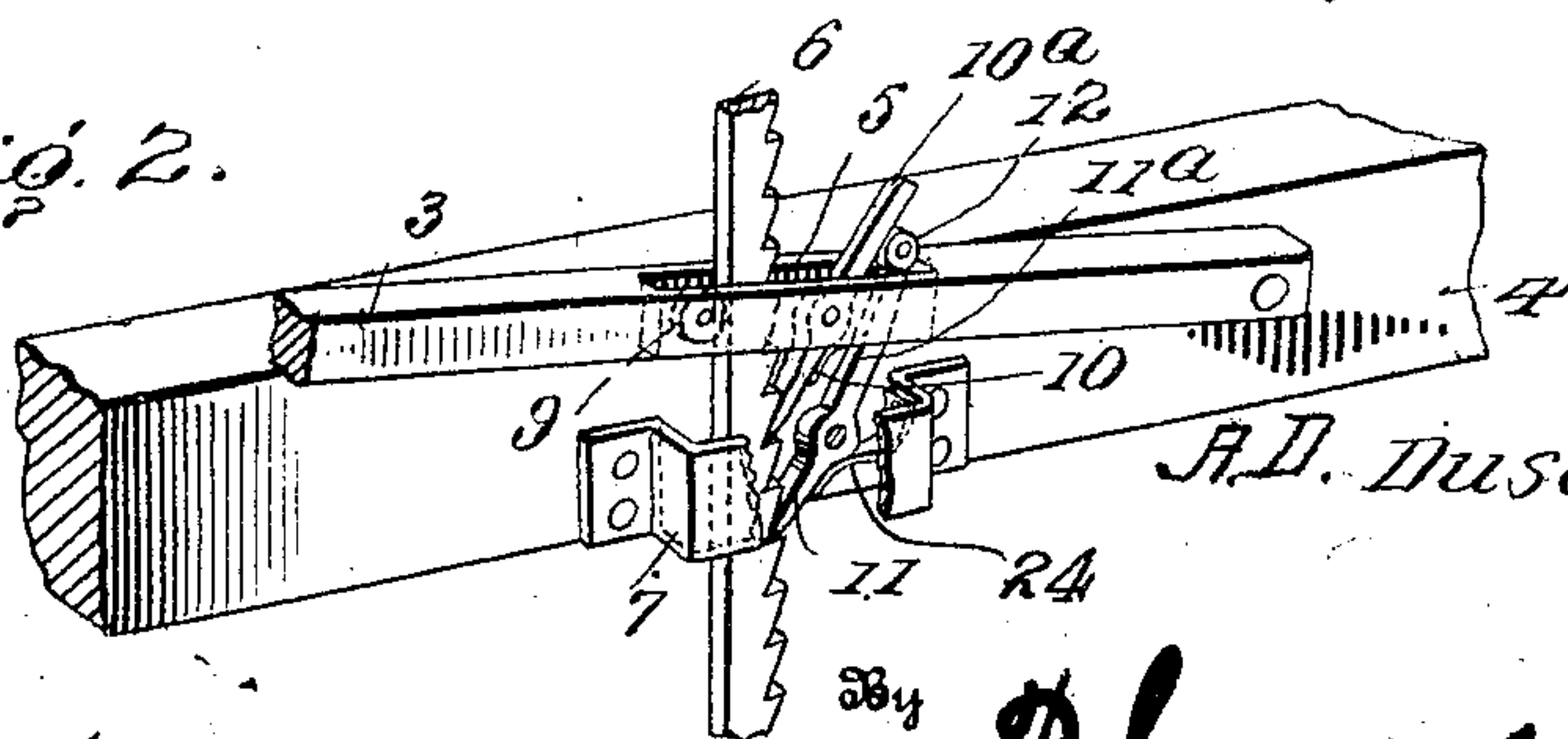


Fig. 2.



Witnesses

[Signature]
[Signature]

Inventor

A. D. Dusenbery,

[Signature], Attorneys.

UNITED STATES PATENT OFFICE.

ALVEY D. DUSENBERY, OF IONIA, KANSAS.

WINDMILL-REGULATOR.

No. 925,569.

Specification of Letters Patent.

Patented June 22, 1909.

Application filed March 27, 1908. Serial No. 423,665.

To all whom it may concern:

Be it known that I, ALVEY D. DUSENBERY, citizen of the United States, residing at Ionia, in the county of Jewell and State of Kansas, have invented certain new and useful Improvements in Windmill-Regulators, of which the following is a specification.

The present invention relates to a novel means for regulating wind mills whereby the same may be automatically thrown out of gear with the pump rod when the tank or reservoir is full.

The object of the invention is to design a wind mill regulator of this character which is simple and durable in its construction and is peculiarly designed so as to operate effectively in all kinds of weather.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction and the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a diagrammatic view of a pump regulator embodying the invention, portions being shown in section. Fig. 2 is an enlarged detail view of the operating lever and cooperating parts.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawing, the numeral 1 designates the pump rod which has an operative connection with the wind mill in any approved manner and is provided upon one side with a keeper 2. Loosely received within this keeper is an extension at one end of a lever 3, the opposite end of the lever being pivotally mounted upon any support such as the beam 4. An opening 5 is provided at an intermediate point in the lever 3 and loosely receives a draw bar 6 having the upper end thereof connected to the wind mill in such a manner that when the bar is drawn downwardly the wind mill is thrown out of gear with the pump mechanism. This draw bar 6 also passes loosely through a keeper 7 upon the beam 4 and is provided upon one side with the teeth 8, the opposite side bearing loosely against anti-friction rollers 9 carried by the lever and bracket respectively. A pair of pawls 10 and 11 which cooperate with the toothed portion of the draw bar are pivoted respectively upon the lever 3 and beam 4 and the pawl 11 is formed with a rearward

extension 11^a carrying a roller 12 adapted to engage an extension 10^a upon the pawl 10 whereby the latter mentioned pawl is automatically thrown into an inoperative position when the first mentioned pawl is moved out of engagement with the draw bar. Springs 24 of the conventional construction may be utilized for holding the two pawls normally in an operative position and the pawl 11 is connected to a cable or flexible member 13 which passes rearwardly around a guide member 14 upon the beam 4 and thence downwardly to a float 15 loosely mounted in the upper portion of the regulator reservoir 16. This regulator reservoir 16 communicates with the main tank or reservoir 17 through a pipe 18, one end of the pipe opening at the bottom of the regulator reservoir and the mouth thereof being designed to be automatically closed by a valve 19 when the water in the reservoir falls below a predetermined level. This valve 19 is secured to the lower end of a rod 20 which slides freely through brackets 21 in the regulator reservoir and is provided at its upper extremity with a float 22, the buoyant action of the water upon the float serving to lift the valve 19 and hold the same in an open position when the tank is full. In order that the regulator device may operate efficiently in freezing weather it is preferred that some liquid such as coal oil which does not freeze at the ordinary temperatures be placed in the regulator tank or reservoir 16, and owing to the fact that coal oil is lighter than water it will remain upon the surface of the same and the closing of the valve 19 will prevent the coal oil in the regulator tank from entering the main tank when the level of the water within the reservoir is lowered.

In the operation of the wind mill regulator it will be obvious that when the tank is full the float 15 will be held in an elevated position and the springs will throw the two pawls 10 and 11 into operative positions. As the pump rod 2 is then reciprocated up and down the lever 3 will be swung upon its pivot and the pawl upon the lever will serve to pull the draw bar downwardly while the pawl upon the beam 4 will act as a detent to prevent upward movement of the draw bar. In this manner the wind mill is thrown out of gear with the pump rod and attention is directed to the fact that the upper end of the draw bar instead of being toothed is provided with the rollers 23 which engage the pawls,

the said rollers reducing the friction between the ends of the pawls when the latter are swung outwardly and enabling them to be easily thrown into an inoperative position.

5 As the water is withdrawn from the tank and the surface thereof lowered the float 15 drops and when the float reaches a predetermined point the cable 13 swings the lower pawl 11 out of engagement with the toothed portion 10 of the draw bar and owing to the action of the extension 11^a of the pawl and the roller carried thereby the pawl 10 upon the lever is also moved into an inoperative position. The draw bar is then released and the wind 15 mill thrown into gear with the pump rod so that the pump mechanism is again actuated to replenish the reservoir or tank with water.

Having thus described the invention, what is claimed as new is:

20 1. In a wind mill regulator, the combination of a pump rod, a reciprocating lever actuated by the pump rod, a toothed draw bar having a sliding connection with the reciprocating lever and also having an operative 25 connection with the wind mill for throwing the pump into and out of gear, a movable pawl carried by the lever and normally engaging the teeth of the draw bar, the said pawl being provided with an extension which 30 projects beyond its pivot, a fixed pawl also engaging the draw bar and formed with an extension projecting beyond its pivot, a roller mounted upon the extension of the fixed pawl for engagement with the extension 35 of the movable pawl to swing the latter into an inoperative position when the fixed pawl is moved into such position, and means for controlling the fixed pawl.

2. In a wind mill regulator, the combination of a lever actuated by the pump mechanism, a toothed draw bar for controlling the 40 wind mill, rollers journaled upon the toothed draw, pawls cooperating with the lever and draw bar, the said pawls being adapted to engage the rollers when the pawls are in operative position, and means for moving the 45 pawls into an inoperative position to release the draw bar.

3. In a wind mill regulator, the combination of a tank, a regulator tank in communication with the main tank, means for shutting off communication between the regulator tank and main tank when the water falls below a predetermined level, a float 50 within the regulator tank, and means actuated by the float for controlling the wind mill. 55

4. In a wind mill regulator, the combination of a lever actuated by the pump mechanism, a toothed draw bar for controlling the 60 wind mill, pawls cooperating with the lever and draw bar, a main tank, a regulator tank in communication with the main tank, means for automatically shutting off communication between the main tank and regulator 65 tank when the water falls below a predetermined level, a float within the regulator tank, and connecting means between the float and the pawls.

In testimony whereof I affix my signature 70 in presence of two witnesses.

ALVEY D. DUSENBERY. [L. S.]

Witnesses:

O. A. MILLER,
J. G. KERR.